Amendments to the Specification:

Please replace paragraph [0004] with the following amended paragraph:

[0004] Devices such as radios, mobile phones, MP3-players, tape recorders often generate audio signals (e.g., music or voice). In a typical scenario, an analog signal (or digital data) representing the audio signal is received either from a local medium (e.g., audio tape, laser disk) or from an external source (e.g., network, air), and audio signals ~~is~~ are generated for the users.

Please replace paragraph [0008] with the following amended paragraph:

[0008] In addition, it may be desirable for the headset detector to detect the type of headset inserted into the device. As is well known, headsets are of multiple types, each generally suited for specific devices and environments. For example, a stereo headset contains two speakers and no microphone, can be used to play music, and is suited for use associated with~~and~~ MP3 player type of devices. On the other hand, a cellular headset used associated with mobile phones contains a speaker and a microphone, and enables a user to place/answer a call. As another example, a stereo+cellular headset contains two speakers and a microphone, and can be used as a combination of stereo and cellular headsets.

Please replace paragraph [0029] with the following amended paragraph:

[0029] A headset detector provided according to an aspect of the present invention determines whether a headset is present in a jack by measuring the impedance between at least a pair of the connection points of the jack. A signal may be generated with a first logical value if the headset is determined to be present, and with the other logical value otherwise. Due to such a feature, the presence of a headset in the jack can be detected without potentially using mechanical movement (as noted above in the related art section) of switches, etc.

Please replace paragraph [0031] with the following amended paragraph:

[0031] Various aspects of the present invention are described below with reference to an example problem. Several aspects of the invention are described below with reference to examples for illustration. It should be understood that numerous specific details, relationships, and methods are set forth to provide a full understanding of the invention. One skilled in the relevant art, however, will readily recognize that the

invention can be practiced without one or more of the specific details, or with other methods, etc. In other instances, ~~well-known~~ well-known structures or operations are not shown in detail to avoid obscuring the invention.

Please replace paragraph [0042] with the following amended paragraph:

[0042] Figures 2A, 2B and 2C are diagrams together illustrating the details of various jacks suitable for different types of headsets. In particular, ~~Figure 2A is shown containing jack 210, Figure 2B is shown containing jack 220 and Figure 2C is shown containing jack 240. Jacks~~ jacks 210, 220 and 240 are respectively suitable for stereo headset, cellular headset and stereo+cellular headset application. In Figures 2A, 2B and 2C, the ~~notation~~ notations g, m, and s respectively represent connection points to ground, microphone and speaker(s) in headsets.

Please replace paragraph [0044] with the following amended paragraph:

[0044] Jack 240 can be used as a common jack to connect all kinds of headsets since jack 240 contains four connection points, which would provide connections to ~~a~~ both ~~3-wire/4-wire~~ 3-wire and 4-wire headsets. A jack of type jack 240 may be used for jack 160 of Figure 1. However, jacks 210 or 220 may be used for jack 160 for some aspects of the present invention. The ~~connection diagram~~ connections for different headsets to the common jack (240) ~~is~~ are described below with reference to ~~Figure 3~~ Figures 3A, 3B and 3C.

Please replace paragraph [0049] with the following amended paragraph:

[0049] Speaker 321 in turn contains two connecting terminals s and g, and microphone 322 contains connecting terminals m and g. The s terminal of speaker 321 is connected to one s point on jack 240, the m terminal of microphone 322 is connected to the m point on jack 240 and the g terminal from both speaker 321 and microphone 322 is connected to the g point on jack 240. ~~The another~~ Another s point on jack 240 remains floating (no connection) since cellular headset 320 contains only one speaker.

Please replace paragraph [0050] with the following amended paragraph:

[0050] With reference to Figure 3C, stereo+cellular headset 340 is shown containing speakers 341 and 342, microphone 343, resistor 344 and button 345. Resistor 344 and button 345 operate similar to resistor 323 and button 324 of cellular headset 320, respectively. Each speaker 341 and 342 in turn contains two connecting terminals s and g

and microphone 343 contains connecting terminals m and g. The s terminal of each speaker 341 and 342 is connected to ~~each of~~ a corresponding s point on jack 240, the m terminal of microphone 343 is connected to the m point on jack 240 and the g terminal from speakers ~~341 and 342,~~ 341, 342 and microphone 343 is connected ~~to~~ to the g point on jack 240.

Please replace paragraph [0053] with the following amended paragraph:

[0053] Figures 4, 5 and 6 together illustrate the details of headset interface circuit 150 in one embodiment. Merely for illustration, use of the headset interface with stereo headset 310 is described, however, similar approaches can be used with other types of headsets. Two types of headset interfaces are typically used: ~~cap-less~~ cap-less interface and cap interface, which are further described below with reference to Figures 4 and 5, respectively.

Please replace paragraph [0055] with the following amended paragraph:

[0055] In general, the signal on paths 411 and 412 changes both in positive and negative directions with reference to a common voltage (Vmid) such that the average value is zero. The g terminal of speakers 311 and 312 is connected to a voltage equal to Vmid. The difference of voltage levels on g (Vmid) and s terminals (signals on paths 411 and 412) would cause the signal across speakers 311 and 312 to change with respect to zero voltage level and any D.C. (Vmid) voltage does not appear across the speakers. The D.C. voltage ~~otherwise~~ applied to speakers 311 and 312 would otherwise decrease the ~~life time~~ lifetime of the speakers.

Please replace paragraph [0057] with the following amended paragraph:

[0057] Stereo headset 310 receives a signal representing the audio (e.g., Music) to be played by speakers 311 and 312 on respective paths 513 and 523. The g terminal of speakers 311 and 312 is connected to ground. As a result, the signal on paths 513 and 523 does not contain D.C. components. The D.C. components otherwise applied to speakers 311 and 312 would decrease ~~life time~~ the lifetime of the speakers. The manner in which various signals would change is described below.

Please replace paragraph [0066] with the following amended paragraph:

[0066] Ground voltage driver 775 provides the required ground voltage (for example, Vmid as described above with reference to Figure 4) to the inserted headset.

The ground voltage may be generated using power supply (not shown) and may be implemented in a known way. Micbias driver 770 provides the required bias voltage to microphones 322 and 343, in case the inserted headset is of ~~headsets~~ the headset 320 (cellular) ~~and~~ or headset 340 (stereo+cellular) type, respectively. The signal representing the audio received from microphones 322 and 343 is provided at node 728.

Please replace paragraph [0071] with the following amended paragraph:

[0071] Thus, the presence of headset in a jack may be determined by measuring the impedance between at least a pair of the connection points of the jack. For example, the impedance ~~is~~ may be measured between the g and m connection points of a jack. A signal may be generated with a first logical value if the headset is determined to be present, and with the other logical value otherwise. Due to such a feature, the presence of a headset in the jack can be detected without potentially using mechanical movement of switches, as described below in further detail.

Please replace paragraph [0075] with the following amended paragraph:

[0075] Voltage on node 728 = Vbias (Rmic/(Rmic + R786)) Equation (1)

wherein R786 represents the resistance of resistor 786 connected between nodes 779 and 728.

Please replace paragraph [0098] with the following amended paragraph:

[0098] Once the type of headset is detected, it may be required to perform different operations depending on the type of headset inserted. For example, music/audio may need to be played in case the inserted headset is of stereo headset type and ~~answer~~ a phone call answered in case the inserted headset is of cellular headset type, etc. However, some of the operations may not be performed until button (324 /345) is pressed in case ~~of~~ the inserted headset is detected to be of cellular headset 320 or stereo+cellular headset 340 type. The manner in which the pressing of the button (hereafter "button press") may be detected is described below.

Please replace paragraph [0101] with the following amended paragraph:

[0101] Thus, button press may be detected momentarily by measuring the impedance between a pair of the connection points of the jack. For example, the impedance is measured between g and m connection points of a jack since the button is

connected between g and m connection points in each of cellular headset 320 and stereo+cellular headset 340. The manner in which button press may be detected is described in further detail below.

Please replace paragraph [0115] with the following amended paragraph:

[0115] Figure 8 is a timing diagram of a detect pulse used to reduce power consumption in an embodiment of the present invention. The detect pulse may be provided on path 792 of Figure 7. The detect pulse is used to reduce power consumption in some situations ~~whether~~ wherein substantial power may otherwise be consumed. For example, in case of detecting headset insertion, detector circuit 130 may not consume substantial power since no direct path is present between Vdd and Vss until headset is inserted in jack 240. However, in case of headset removal and button press detection, headset is already present in jack 240, which forms a path and may thus cause substantial power consumption in various components of detector circuit 130.

Please replace paragraph [0123] with the following amended paragraph:

[0123] In step 910, switch 790-2 may be opened, for example when device 110 is reset at the time of power on. In step 920, switch 790-3 is closed to provide connection to Vss or ground. In step 930, a determination is made as to whether micbias driver 770 is turned on. As noted above, ~~micbiad~~ micbias driver 770 provides the bias voltage to various components in detector circuit 130. If micbias driver 770 is turned on, control passes to step 950, else control passes to step 940.

Please delete heading "18. Conclusion" indicated as paragraph [0161] as follows:

[0161] ~~18. Conclusion~~